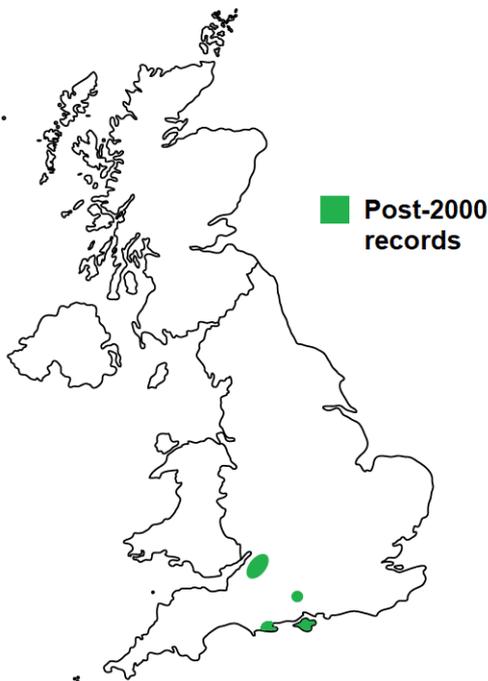


Rock-rose Pot Beetle

Cryptocephalus primarius

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Rock-rose Pot Beetle distribution across Britain and Northern Ireland.

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A distinctive beetle owing to its black thorax, head and legs, and red abdomen typically supporting five small black spots on each elytron (wing case).

The Rock-rose Pot Beetle is the largest of the 19 British *Cryptocephalus* (or pot beetle) species, measuring up to 8mm in length. Like other pot beetles, the head is strongly retracted and sunk into the thorax, and the body is somewhat cylindrical. Confusion with other British pot beetle species is unlikely, the exception perhaps being *Cryptocephalus bipunctatus* which usually has either a single black band or two black spots on each elytron.

Lifecycle

Like other pot beetle species, Rock-rose Pot Beetle larvae live within a protective, shell-like cocoon (or 'pot') created using their own faeces. Larvae are believed to feed from within the safety of their 'pot' on the leaf litter of Common Rock-rose (*Helianthemum nummularium*), though this remains unconfirmed. The ecology of this species is little known but it is probable that (like other pot beetle species) the larvae take two years to reach maturity.

Adults feed on the petals, anthers and pollen of Common Rock-rose and are active in late spring and summer, from mid-May to mid-July. Other food plants may also be used.

Habitat

The Rock-rose Pot Beetle is a species of unimproved calcareous grassland. Adults typically occur in warm, dry, sheltered conditions on south-facing slopes, suggesting an underlying thermal requirement. A short sward and an abundance of Common Rock-rose are deemed important.

Distribution

The Rock-rose Pot Beetle has always been a scarce species in Britain. Most historical records originate from calcareous grasslands in southern England, with disjunct records also from Perthshire in Scotland. A decline in this species is evident as it is currently known from just a few calcareous grasslands in Dorset, Gloucestershire and Hampshire.

GB status and rarity

Endangered (IUCN) and Nationally Rare (GB).

Protection under the law

This beetle is included as a species "of principal importance for the purpose of conserving biodiversity" under Section 41 (England) of the Natural Environment and Rural Communities Act 2006.

Survey method

Due to their small size and (like their leaf beetle relatives) their tendency to drop to the floor when disturbed, Rock-rose Pot Beetles are difficult to survey. They are perhaps best found by sweeping south-facing slopes of calcareous grassland, or through careful searching on and around their host plants by eye.

Reasons for decline

One of the main reasons for decline is the loss of suitable habitat due to agricultural 'improvement', particularly the use of fertilisers, herbicides and other pesticides, re-seeding or ploughing for arable crops. Further declines have been caused by habitat loss or degradation to natural succession (i.e. scrub development), caused by insufficient, inappropriate or an absence of land management.

Intensive farming remains a threat, particularly the use of agricultural chemicals, re-seeding of calcareous grasslands, or conversion to arable use. An absence of or insufficient management resulting in scrub encroachment onto south-facing calcareous slopes is another threat, as is overgrazing with livestock.

Habitat management

The maintenance of open conditions with an abundance of Common Rock-rose is important. This is best achieved through rotational livestock grazing using sheep or cattle, though care needs to be taken with stocking densities to avoid overgrazing. Aim to graze for some or all of the period between late autumn and spring. This will remove old growth, leaving an open short sward. Consider removing livestock for the summer months, thus ensuring plants and the ground remain undisturbed during the main growing season.

Cutting will be required should grazing be unfeasible. Leave some areas uncut each year, cutting on a rotation every few years. Cutting should be done as late in the summer as possible, allowing plants to set seed and invertebrates to complete their reproductive cycles. It is important to remove cuttings to prevent the accumulation of nutrients in the soil, which is detrimental to many plant species.

Scrub encroachment is a natural consequence of insufficient, inappropriate or an absence of grazing management and is a major threat to Rock-rose Pot Beetle populations. Scrub management interventions should be implemented to arrest further scrub encroachment where it is deemed to be a threat. This is best achieved before dense thickets are formed. Scrub should be removed sensitively, with an aim to achieve a balance between open sunny areas and scrub.

Scrub is typically controlled by scrub cutting and selective treatment with herbicides, or stump grinding and removal. This should be undertaken during the winter when scrub is not actively growing and to ensure disturbance to wildlife is kept to a minimum. Where possible, grazing can be used following cutting of scrub to browse and prevent regrowth.